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a first determination means for determining whether or not a pixel included in an image is a color pixel by using the reference value;  
means for dividing the image into a predetermined number of a plurality of blocks;  
counting means for counting the number of color pixels for each block; and  
second determination means for determining whether or not the image is a color image based on the counting result by the counting means.

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4. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block;  
second determination means for determining whether or not the image is a color image based on the counting result by the counting means;  
third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein  
the second determination means determines whether or not the image is a color image based on the determination result by the third determination means, and  
the third determination means determines a block as a color block in case color pixel ratio which is the ratio of the number of color pixels to that of entire pixels in the block exceeds a first threshold; and

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fourth determination means for determining whether or not a block has a feature of a specified color, wherein

the third determination means determines a block which has the feature as a color block in case the color pixel ratio exceeds a second threshold which is lower than the first threshold.

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8. (Amended) An image processing apparatus including:

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first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block; and

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means,

the third determination means determines a block as a color block in case color pixel ratio which is the ratio of the number of color pixels to that of entire pixels in the block exceeds a first threshold, and

the first threshold for at least one block differs from the first threshold for other blocks.

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10. (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means, and

the third determination means determines a block as a color block in case color pixel ratio which is the ratio of the number of color pixels to that of entire pixels in the block exceeds a first threshold; and

means for adjusting the first threshold using an operation panel.

11. (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means,

the third determination means determines a block as a color block in case color pixel ratio which is the ratio of the number of color pixels to that of entire pixels in the block exceeds a first threshold, and

the third determination means determines a block on a certain portion as a color block in case color pixel ratio of the block exceeds a second threshold which is lower than the first threshold.

13 (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means,

the third determination means determines a block as a color block in case color pixel ratio which is the ratio of the number of color pixels to that of entire pixels in the block exceeds a first threshold, and

the second determination means determines an image as a color image irrespectively of the determination results for the other blocks by the third determination means in case a block having a color pixel ratio exceeding a second threshold higher than the first threshold is discovered.

35 14. (Amended) An image processing apparatus of claim 13, further including means for adjusting the second threshold.

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C1 15. (Amended) An image processing apparatus of claim 2, wherein the third determination means determines a block as a color block in case the number of color pixels within a block exceeds a first threshold.

16. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block;  
second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means, and

the second determination means determines an image as a color image irrespectively of the determination results for the other blocks by the third determination means in case the third determination means determines a block on a certain portion as a color block.

18. (Amended) An image processing apparatus of claim 2, wherein

the second determination means determines an image as a color image in case a color block ratio which is the ratio of the number of color blocks to all of the blocks included in the image exceeds a first threshold.

19. (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means;

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means, and

the second determination means determines an image as a color image in case a color block ratio which is the ratio of the number of color pixels to all of the blocks included in the image exceeds a first threshold; and means for adjusting the first threshold using an operation panel.

20. (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

third determination means for determining whether or not said each block is a color block, respectively, based on the number of color pixels for each block, wherein

the second determination means determines whether or not the image is a color image based on the determination result by the third determination means, and

the second determination means determines an image as a color image in case a color block ratio which is the ratio of the number of color pixels to all of the blocks included in the image exceeds a first threshold, and

28 the second determination means counts the number of color blocks putting a predetermined weight on a block on a certain portion.

22. (Amended) An image processing apparatus of claim 2, wherein the second determination means determines an image as a color image in case the number of color blocks included in the image exceeds a first threshold.

23. (Amended) An image processing apparatus of claim 1, wherein the second determination means determines an image as a color image in case a block having color pixels which exceeds a first threshold in number is discovered.

24. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block;  
second determination means for determining whether or not the image is a color image based on the counting result by the counting means, and  
group processing means for summing up the number of color pixels for a block group consisting of a plurality of blocks adjacent to one another, wherein  
the second determination means determines whether or not an image is a color image based on the group processing result.



25. (Amended) An image processing apparatus of claim 24, further including a third determination means for determining whether or not a target block is a color block based on the number of color pixels for the block group which includes the target block, wherein

the second determination means determines whether or not the image is a color image based on determination result by the third determination means.

26. (Amended) An image processing apparatus of claim 25, wherein

the third determination means determines a target block as a color block in case group color pixel ratio which is ratio of the number of color pixels to the number of all pixels in the block group represented by the block exceeds a first threshold, and

27. (Amended) An image processing apparatus of claim 26, further including means for adjusting the first threshold.

28. (Amended) An image processing apparatus of claim 24, wherein

the second determination means determines an image as a color image in case a block group whose color pixels as total of the group exceed a first threshold in total as the group is discovered.

31. (Amended) An image processing apparatus including:

first determination means for determining whether or not a pixel included in an image is a color pixel;

means for dividing the image into a plurality of blocks;

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counting means for counting the number of color pixels for each block; and  
second determination means for determining whether or not the image is a color image  
based on the counting result by the counting means, wherein  
the second determination means excludes a block on a certain portion from the  
determination, and  
the certain portion includes image folding portions on an original in the form of a book.

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34. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a  
color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block;  
second determination means for determining whether or not the image is a color image  
based on the counting result by the counting means; and  
means for correcting the counting result of the number of color pixels for a specified  
block on a certain portion, wherein  
the certain portion includes image folding portions on an original in the form of a book.

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36. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a  
color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

a saturation data extracting unit for extracting saturation data based on difference values of maximum values and minimum values of an R datum, a G datum and a B datum of each pixel, wherein

the first determination means determines a pixel as a color pixel in case saturation of the pixel exceeds a first threshold.

37. (Amended) An image processing apparatus of claim 36, wherein the first threshold for some pixels differs from the first threshold for other pixels.

38. (Amended) An image processing apparatus of claim 37, wherein the first threshold of pixels farther from a center of the image is higher than that of pixels closer to the center of the image.

39. (Amended) An image processing apparatus of claim 26, further including means for adjusting the first threshold.

40. (Amended) An image processing apparatus including:  
first determination means for determining whether or not a pixel included in an image is a color pixel;  
means for dividing the image into a plurality of blocks;  
counting means for counting the number of color pixels for each block; and

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

a saturation data extracting unit for extracting saturation data based on difference values of maximum values and minimum values of an R datum, a G datum and a B datum of each pixel, wherein

the first determination means determines a pixel as a color pixel in case the saturation of the pixel exceeds a first threshold and the brightness of it is below a second threshold.

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41. (Amended) An image processing apparatus of claim 40, wherein the second threshold for some pixels differs from the second threshold for other pixels.

42. (Amended) An image processing apparatus of claim 41, wherein the second threshold of pixels farther from a center of the image is higher than that of pixels closer to the center of the image.

43. (Amended) An image processing apparatus of claim 40, further including means for adjusting the second threshold.

44. (Amended) An image processing apparatus of claim 40, wherein the second threshold is lower than the brightness of pixels on a base portion.

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52. (Twice Amended) An image forming apparatus including:  
means for inputting an image;

a brightness data extracting section for extracting brightness data from image information of each pixel;

means for determining a reference value based on extracted brightness data;

a first determination means for determining whether or not a pixel included in the input image is a color pixel by using the reference value;

means for dividing the image into a predetermined number of a plurality of blocks;

counting means for counting the number of color pixels for each block;

second determination means for determining whether or not the image is a color image based on the counting result by the counting means; and

printing means performing color-printing in case the second determination means determines the image as a color image, and performing monochrome-printing in case the second determination means determines the image as a non-color image.

56. (Twice Amended) Color image determination method including:

a step of extracting brightness data from image information of each pixel;

a step of determining a reference value based on extracted brightness data;

a step of determining whether or not pixels included in an image are color pixels, respectively, by using the reference value;

step of dividing the image into a predetermined number of a plurality of blocks;

step of counting the number of color pixels for each block; and

step of determining whether the image is a color image based on the counting.

Please add new claims 58 and 39 as follows:

58. (NEW) An image processing apparatus of claim 1, further comprising a saturation data extracting unit for extracting saturation data from image information of each pixel, wherein the first determination means compares saturation data of each pixel with the reference value to determine whether or not a pixel is a color pixel.

59. (NEW) An image processing apparatus comprising:  
a saturation data extracting unit for extracting saturation data based on difference values of maximum values and minimum values of an R datum, a G datum and a B datum of each pixel;  
a first determination means for comparing saturation data of each pixel with the reference value and determining whether or not the pixel is a color pixel;  
means for dividing an image into a predetermining number of a plurality of blocks;  
counting means for counting the number of color pixels for each block; and  
second determination means for determining whether or not the image is a color image based on the counting result by the counting means.